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09/966,259	10/01/2001	Richard C. Rose	2000-0572	5143

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EXAMINER
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WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2626

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02/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 09/966,259	Applicant(s) ROSE ET AL.	
	Examiner James S. Wozniak	Art Unit 2626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. In response to the office action from 8/14/2007, the applicant has submitted an amendment, filed 11/14/2007, amending independent claims 1, 13, and 21, while arguing to traverse the art rejection based on the limitation regarding the probability of a user being in a particular environment (*Amendment, Pages 9-18*). The applicant's arguments have been fully considered but are moot with respect to the new grounds of rejection in view of Rahim (*U.S. Patent: 5,960,397*). The applicant's arguments with respect to claim 14 have been fully considered but are moot with respect to the new grounds of rejection in view of Hoffberg et al (*U.S. Patent: 5,875,108*).

2. It is worth pointing out that the applicant has argued that the probability of a user being in a particular is environment is based upon a time of day (*Amendment, Page 12*). Although a limitation including this subject matter is not presently claimed, it does appear to be supported by the specification (*Specification, Page 6, Lines 10-21*). Thus, as --a probability of the user being in a particular acoustic environment based on a time of day-- does not appear to be taught by the prior art of record, it is noted that adding this limitation to the presently claimed invention may overcome the below art rejections.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 14** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 14 recites that a *mobile device* is recognized based on an RF ID tag, while the specification discloses that “the radio frequency tags identify each *user*” (*i.e., association between a user and an RF ID, Paragraph 0040*). There is no description in the specification of directly linking an RF ID to a mobile device for identification of the device. Thus, claim 14 fails to comply with the description requirement.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-4, 8-9, 13, 15, 18-19, 21-23, and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al (*U.S. Patent: 7,050,974*) in view of Rahim (*U.S. Patent: 5,960,397*) and further in view of Besling et al (*U.S. Patent: 6,363,348*).

With respect to **Claims 1, 13, and 21**, Komori recites:

A memory that stores user voice data and data related to at least one of a communication device, transducer, and vocal information (*model holding unit, Col. 2, Lines 25-34; Col. 3, Lines 24-30; and adaptation data types, Col. 5, Lines 3-35*);

A controller coupled with the memory that determines the data of the at least one communications device, transducer, vocal information, and acoustic environmental data and then compensates at least one speech recognition model to reflect the user data (*speech recognition model adaptation unit, Col. 3, Lines 24-30; and Col. 5, Lines 3-35*);

A communication device that receives speech utterances over a network (*network communication means, Col. 2, Lines 10-14; Fig. 1, Element 300; and Abstract*); and

A speech recognizer that recognizes the speech utterances by using the at least one compensated speech recognition model (*speech recognition unit, Fig. 1, Element 203; and speech recognition performed using adapted models, Col. 4, Lines 61-66*).

Although Komori discloses a network-based speech recognizer that compensates speech recognition models according to varying conditions, Komori does not explicitly recite compensating a speech recognition model according to a probability of a user being in a particular acoustic environment. Rahim, however, discloses the use of such probability values to identify the acoustic environment with respect to speech features of a user and compensate a speech recognition model accordingly (*Col. 6, Lines 1-14*).

Komori and Rahim are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori with the environment identification probability taught by Rahim in order to make speech recognition more applicable to multiple differing acoustic environments (*Rahim, Col. 2, Lines 40-41*).

Although Komori in view of Rahim discloses a network-based speech recognition system and method that adapts a speech recognition model based on an environment probability, Komori in view of Rahim does not explicitly recite a controller that associates models with a particular user and updates a stored recognition model based on the user profile. Besling, however, recites a retrieving means that retrieves a basic recognition model from memory, retrieves an adaptation profile identified by a user ID (*user profile*), and, adapts a recognition model under control of the adaptation profile (*Col. 7, Line 35- Col. 8, Line 55*).

Komori, Rahim, and Besling are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim with the adaptation model storage and retrieving means taught by Besling in order to implement more efficient speech recognition model storage that only requires storing one basic model of a given type and smaller adaptation profiles (*Besling, Col. 4, Line 67- Col. 5, Line 2*).

With respect to **Claims 2 and 22**, Komori further recites:

The transducer data includes a distortion value related to a transducer of a mobile communications device (*portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and microphone distortion, Col. 5, Lines 13-24*).

With respect to **Claims 3 and 23**, Komori further recites:

The acoustic environmental data includes a background noise value that corresponds to an operating environment of a mobile communications device (*portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and noise distortion, Col. 3, Lines 24-30; Col. 5, Lines 3-12*).

With respect to **Claim 4**, Komori further recites:

The vocal information includes a distortion value related to an end user associated with a mobile communications device (*portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and speaker adaptation, Col. 5, Lines 25-34*).

With respect to **Claims 8 and 27**, Komori teaches speech recognition performed at a network server (*Fig. 1, Element 200*), while Besling recites the use of HMM speech models (*Col. 2, Lines 60-67*).

With respect to **Claims 9 and 28**, Komori teaches speech recognition performed at a network server system (*Fig. 1, Element 200*) having environment, speaker pronunciation, and microphone adaptation elements, and feature a storing means in communication with a speech recognizer (*Col. 3, Lines 24-30; Col. 5, Lines 3-35; and Fig. 1*).

With respect to **Claims 15 and 29**, Komori recites:

The acoustic environmental data is determined using at least one microphone in an end user's environment (*microphone for speech input, Fig. 1, Element 101; and Col. 5, Lines 13-24*).

With respect to **Claim 18**, Komori discloses:

The vocal information represents a variability that exists in vocal tract shapes among speakers of a group (*speaker-specific adaptation data that would differentiate a particular speaker's voice from other speech recognition network users, Col. 5, Lines 25-34*).

With respect to **Claim 19**, Komori discloses:

The controller communicates with a memory that stores various acoustic environmental models and various features of a specific type of mobile device (*portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and model holding unit, Col. 2, Lines 25-34; Col. 3, Lines 24-30; and adaptation data types, Col. 5, Lines 3-35*).

7. **Claims 5, 6, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and further in view of Kanevsky et al (*U.S. Patent: 6,442,519*).

With respect to **Claim 5**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claim 1. Komori in view of Rahim and further in view of Besling does not teach that the aforementioned data is provided by a personal computer, however Kanevsky teaches a personal computer used to receive speech data (*Col. 4, Lines 18-46*).

Komori, Rahim, Besling, and Kanevsky are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the use of a personal computer for receiving speech data as taught by Kanevsky in order to expand the amount of speech data available for improved speech recognition by utilizing a personal computer connected to a network to receive speaker data (*Kanevsky, Col. 3, Lines 10-35*).



With respect to **Claims 6 and 25**, Kanevsky further teaches a PDA for receiving speech data (*Col. 4, Lines 18-46*).

8. **Claims 7 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling and further in view of Hunt et al (*U.S. Patent: 6,094,476*).

With respect to **Claims 7 and 26**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claims 1 and 21. Komori in view of Rahim and further in view of Besling does not teach that the aforementioned data is provided through a satellite communications system, however Hunt teaches such a satellite communications system (*Col. 4, Lines 16-23*).

Komori, Rahim, Besling, and Hunt are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the use of a satellite communications system as taught by Hunt in order to provide a practical variation of a cellular phone network that allows a user to access voice mail through recognized speech commands (*Hunt, Col. 4, Lines 16-33*).

9. **Claim 10, 17, and 30-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and further in view of Heck et al (*U.S. Patent: 5,950,157*).

With respect to **Claim 10**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation server system utilizing environmental data, as applied to Claim 8. Komori in view of Rahim and further in view of Besling does not specifically teach a means of updating a speaker model to reflect a specific type of communications device, however Heck teaches such an updating means (*Col. 9, Line 30- Col. 10, Line 48*).

Komori, Rahim, Besling, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the speaker recognition model adaptation means taught by Heck in order to implement a robust speaker recognition system that can function in the presence of handset mismatches (*Heck, Col. 2, Lines 5-9*).

With respect to **Claims 17 and 30**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claim 13. Komori in view of Rahim and further in view of Besling does not specifically suggest that the microphone (transducer) data is a distortion value based on a difference between an actual transducer and a response characteristic of a training transducer, however Heck teaches such a distortion value that relates to transducer data (*Col. 10, Lines 9-48*).

Komori, Rahim, Besling, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in

view of Rahim and further in view of Besling with the transducer distortion scores taught by Heck in order to implement a robust speaker recognition system that can function in the presence of handset mismatches (*Heck, Col. 2, Lines 5-9*).

With respect to **Claim 31**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claim 21. Komori in view of Rahim and further in view of Besling does not specifically teach a means of updating a speaker model to reflect a specific type of communications device, however Heck teaches such an updating means (*Col. 9, Line 30- Col. 10, Line 48*).

Komori, Rahim, Besling, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the speaker recognition model adaptation means taught by Heck in order to implement a robust speaker recognition system that can function in the presence of handset mismatches (*Heck, Col. 2, Lines 5-9*).

10. **Claims 11-12, 20, and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and further in view of Cilurzo et al (*U.S. Patent: 6,434,526*).

With respect to **Claim 11**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation server system utilizing microphone, speaker, and environmental noise data, as applied to Claims 1 and 21. Komori in view of Rahim and

further in view of Besling does not teach personal user account administrative information, however Cilurzo teaches such account information (*Col. 5, Lines 27-64*).

Komori, Rahim, Besling, and Cilurzo are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the user account information taught by Cilurzo in order to provide multiple users with access to a network speech recognizer having a capacity that can be expanded dynamically (*Cilurzo, Col. 2, Lines 22-51*).

With respect to **Claims 12 and 32**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claims 1 and 21. Komori in view of Rahim and further in view of Besling does not teach the ability to select a specific speech recognition network, however Cilurzo teaches such a selection ability (*Col. 5, Lines 4-26*).

Komori, Rahim, Besling, and Cilurzo are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the ability to select a specific speech recognition network as taught by Cilurzo in order to provide multiple users with access to a speech recognizer having a capacity that can be expanded dynamically (*Cilurzo, Col. 2, Lines 22-51*).

With respect to **Claim 20**, Cilurzo teaches the user account information as applied to claim 11.

11. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and further in view of Hoffberg et al (*U.S. Patent: 5,875,108*).

With respect to **Claim 14**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing and environmental data, as applied to Claim 13. Komori in view of Rahim and further in view of Besling does not specifically suggest the identification of a device according to an RF ID tag, however Hoffberg teaches such a means for device identification (*Col. 80, Line 37- Col. 81, Line 9*).

Komori, Rahim, Besling, and Hoffberg are analogous art because they are from a similar field of endeavor in systems employing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the RF ID tag taught by Hoffberg in order to provide a means for automatic user identification (*Hoffberg, Col. 80, Line 37- Col. 81, Line 9*).

12. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and yet further in view of Byers (*U.S. Patent: 6,219,645*).

With respect to **Claim 16**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing and environmental data, as applied to Claim 13. Komori in view of Rahim and further in view of Besling does not specifically suggest a plurality of microphones that are initiated as an end user walks in between

the microphones, however Byers teaches such a plurality of microphones (*Col. 3, Lines 11-35; Col. 4, Line 66- Col. 5, Line 12; and Col. 12, Lines 30-56*).

Komori, Rahim, Besling, and Byers are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Rahim and further in view of Besling with the multiple microphone speech recognition system taught by Byers in order to allow a user to control multiple ASR devices while providing mobility through a room or environment (*Byers, Col. 1, Line 65- Col. 2, Line 7*).

13. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Rahim in view of Besling et al and yet further in view of Sönmez et al (*U.S. Patent: 5,745,872*).

With respect to **Claim 24**, Komori in view of Rahim and further in view of Besling teaches the speech recognition model adaptation system utilizing environmental data, as applied to Claim 13. Although Komori recites receiving adaptation data from a wireless telephone (*wireless telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and multiple data types, Col. 5, Lines 3-35*), Komori does not specifically suggest that the wireless telephone is a cellular telephone, however Sönmez teaches speech recognition model adaptation using a cellular phone (*Col. 2, Lines 1-7*).

Komori, Rahim, Besling, and Sönmez are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in

view of Rahim and further in view of Besling with the use of speech recognition model adaptation for a cellular phone as taught by Sönmez in order to adapt speech data to changing cellular phone environments (*Sönmez, Col. 2, Lines 1-7 and 29-36*).

### ***Conclusion***

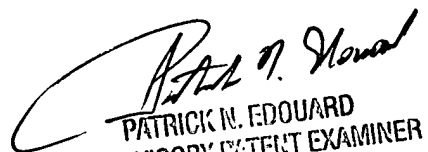
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See PTO-892.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak  
1/15/2008

  
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